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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/826,586

04/16/2004

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03-5296

1757

7590 01/15/2009
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EXAMINER

DUONG, THOI V

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

01/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/826,586	Applicant(s) GOTHARD, DAVID L.	
	Examiner THOI V. DUONG	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-27 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-27 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 60/464,213.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the Amendment filed April 02, 2007.

Accordingly, claims 16 and 18-27 were amended, and claims 1-15 and 28 were cancelled. Currently, claims 16-27 and 29 are pending in this application.

Claim Objections

2. Claim 18 is objected to because of the following informalities: claim 18 recites the limitation "the generated display" in line 4. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

3. Claim 19 is objected to because of the following informalities: claim 19 recites the limitation "the generated display" in line 4. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ochiai (US 6,196,691 B1) in view of Onishi et al. (Onishi, US 6,074,708).

Re claim 16, as shown in Fig. 3, Ochiai discloses an illumination apparatus for LCD displays to provide such displays with high intensity backlighting lights and providing a uniform display comprising:

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a first panel 2 (light guide plate) containing a plurality of high intensity light sources (col. 2, line 66 through col. 3, line 7; col. 3, lines 61-67; and col. 8, lines 40-43);

a diffuser panel 36 (diffusing plate) placed in front of said first panel 2 for further uniformizing the diffracted light, (col. 7, lines 59-67); and

a LCD display panel 40 placed in front of said diffuser panel 36 and being illuminated by the light from the diffuser panel to thereby provide an illuminated LCD display (col. 7, line 57 through col. 9, line 13).

Ochiai discloses that the diffracted light that has passed the diffusing plate 36 is further uniformized, thus illuminating the liquid crystal display panel 40 with great uniformity and high brightness (col. 8, line 65 through col. 9, line 2 and col. 12, lines 28-38). Accordingly, it is obvious that the diffuser panel is placed in front of the first panel to soften light and provide a uniform appearance.

Ochiai discloses an illumination apparatus for LCD that is basically the same as that recited in claim 16 except for LCD/organic display.

Onishi discloses a LCD device comprising liquid crystal materials which are organic mixtures exhibiting a liquid crystal state at room temperature and the vicinity thereof (col. 11, lines 10-29). Accordingly, the LCD device of Onishi is an LCD/organic display.

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a LCD/organic display panel in the illumination apparatus of Ochiai as taught by Onishi in order to improve the display characteristics of the display (col. 6, lines 13-21).

Re claim 17, Ochiai discloses that the high intensity light sources on the first panel are LED lamps 5 (light-emitting diodes) (col. 6, lines 45-54).

6. Claims 18, 19 and 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ochiai (US 6,196,691 B1) in view of Onishi et al. (Onishi, US 6,074,708) as applied to claims 16 and 17 above, and further in view of Shimada et al. (Shimada, US 6,020,867).

Re claims 18 and 19, the illumination apparatus for LCD/organic displays of Ochiai as modified in view of Onishi above includes all that is recited in claims 18 and 19 except for a cover placed in front of said LCD/organic display panel for protection of the display.

As shown in Fig. 148, Shimada discloses a LCD apparatus comprising a backlight unit 530, a diffuser panel 239 (diffusion plate), a LCD panel P, and a cover 242 (face plate) placed in front of the LCD panel P to protect the LCD panel P (col. 11, lines 4-11 and col. 61, line 59 through col. 62, line 20).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the illumination apparatus for LCD/organic displays of Ochiai with the teaching of Shimada by forming a cover placed in front of said LCD/organic display panel in order to protect the LCD panel from intrusion of dirt onto the surface of the LCD panel (col. 11, lines 8-11 and col. 62, lines 12-20).

Re claims 22-27, as shown in Figs. 89 and 90, Shimada also discloses that the diffuser panel 239 disposed in front of the backlight unit 530 may be formed of a

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transparent member such as polycarbonate or glass in order to provide a large area planar distribution showing a high luminance and a good viewing angle characteristic (col. 37, line 52 through col. 38, line 5; and col. 38, lines 29-32).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the illumination apparatus for LCD/organic displays of Ochiai by employing the diffuser formed of polycarbonate or glass as taught by Shimada in order to realize a high luminance and a good viewing angle characteristic for the display (col. 38, lines 29-32).

7. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ochiai (US 6,196,691 B1) in view of Onishi et al. (Onishi, US 6,074,708) and Shimada et al. (Shimada, US 6,020,867) as applied to claims 18, 19 and 22-27 above, and further in view of Holmes (US 4,243,719).

Shimada discloses that the cover 242 is made of a reinforced glass (col. 19, lines 13-17); however, Shimada does not disclose that the reinforced glass of the cover is clear (transparent) polycarbonate glass as recited in claims 20 and 21.

As shown in Fig. 4, Holmes discloses a process for forming a reinforced glass laminate comprised polycarbonate (clear polycarbonate glass), which is useful as an impact and scratch resistant display screen for a display using LEDs (col. 14, lines 14-31).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the illumination apparatus for LCD/organic displays of Ochiai with the teaching of Holmes by having a cover made of

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clear polycarbonate glass in order to obtain an excellent transparency and impact resistance as well as a good resistance to surface damage by external agents (col. 1, lines 4-9 and col. 14, lines 25-31).

8. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ochiai (US 6,196,691 B1) in view of Onishi et al. (Onishi, US 6,074,708) as applied to claims 16 and 17 above, and further in view of Nishio et al. (Nishio, US 5,592,332) and Chen (US 5,825,553).

The illumination apparatus for LCD/organic displays of Ochiai as modified in view of Onishi above includes all that is recited in claim 29 except for a Frenzel lens panel placed between the first panel and the diffuser panel.

At first, as shown in Figs. 8, 10 and 20, Nishio discloses a surface light source 40 comprising a first panel comprising a light guide plate 42 and light sources 43, a diffuser panel 20 (light isotopic diffusing layer), and a lenticular lens 10 placed between the first panel and the diffuser panel 20 (col. 11, lines 13-29), wherein, as shown in Figs. 40A and 41A, the lenticular lens is formed such that the spherical aberration of the lenticular lens is removed and the light collecting loss is minimized (col. 21, lines 19-35).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the illumination apparatus for LCD/organic displays of Ochiai with the teaching of Nishio by using the lenticular lens panel to minimize spherical aberration and hence, the light collecting loss (col. 21, lines 19-35).

Further, as shown in Fig. 2, Chen discloses an optical system comprising a refractive lens 16 using a Frenzel lens on the surface of the lens or as a stand alone element so as to further reduce chromatic aberration (col. 3, lines 57-64).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the illumination apparatus for LCD/organic displays of Ochiai with the teaching of Chen by using an additional Frenzel lens panel in order to further reduce the chromatic aberration (col. 3, lines 60-64).

Response to Arguments

9. Applicant's arguments filed April 02, 2007 have been fully considered but they are not persuasive.

Applicant argued that Ochiai presents an illumination device using a fluorescent light as light source, which is actually a different device than anything taught in the instant invention. The Examiner disagrees since, as shown in Fig. 3, Ochiai in fact discloses that the light source comprising light-emitting diodes 5 as claimed. Moreover, claim 16 does not recite an illumination apparatus comprising light-emitting diodes.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., light emitting diodes, compactness, downsizing of the LCD panel) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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Applicant further argued that Onishi discloses liquid crystal materials and organic mixtures which provide for photo-initiation. Again, the Examiner disagrees since Onishi really discloses an organic liquid crystal material used for liquid crystal device; moreover, the claims do not exclude an organic liquid crystal material comprising a photoinitiator.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Ochiai alone discloses an illumination apparatus for a liquid crystal display comprising every limitations of claim 16 except for a LCD/organic display panel; therefore, Onishi is employed for teaching a LCD/organic display panel having chemical stability and orientation stability for improving display characteristics of a liquid crystal panel (col. 6, lines 13-21). Thus, there is some teaching, suggestion, or motivation that the references can be combined to produce the claimed invention.

Re claims 20 and 21, Applicant further argued that it is impermissible for the Examiner merely to find a reference dealing with polycarbonate glass unless that reference teaches of a cover made of such material.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In this case, Shimada discloses a cover made of a reinforced glass and Holmes discloses a reinforced glass comprising polycarbonate (or a clear polycarbonate glass), which is useful as an impact resistant display screen for a display using LEDs (col. 14, lines 14-31). Accordingly, it has been held that a prior art reference is in the field of Applicant's endeavor. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). Therefore, it is permissible for the Examiner to employ an analogous art.

The same holds true for diffuser panels made of polycarbonate in claims 23, or glass in claim 24. Shimada is also an analogous art and is employed for teaching a diffuser panel made of polycarbonate or glass (see Fig. 90 and col. 58-61).

It is also noted that the Examiner has not dismissed any limitation, especially in claims 23 and 24, because each and every limitation in a claim has been considered since the previous office action.

In summary, Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms, can be reached at (571) 272-1787.

/Thoi V. Duong/ - Primary Examiner

January 12, 2009